

WHAT IS CLAIMED IS

1. A process for production of an optically diffractive structure provided with a surface configuration having plural corrugation-like convexo-concave shapes, comprising steps of:

providing a duplication plate material provided with a surface configuration having plural corrugation-like convexo-concave shapes, and having a cross-sectional surface crosswise to said corrugation, in which a salient section which is defined by a salient line and a middle line which is drawn by connecting midpoints of the height of the convexo-concave shapes is smaller in area than that of an adjacent reentrant section which is defined by a reentrant line and the middle line and these salient and reentrant sections are situated next to each other on the bias having midpoints in common;

pressing an optically diffractive layer made of ionizing radiation curable resin with the duplication plate material under a heating or non-heating condition to impart a surface configuration having plural corrugation-like convexo-concave shapes to the optically diffractive layer; and

curing the optically diffractive layer with ionizing radiation after and/or upon providing said surface configuration.

2. A process for production of an optically diffractive structure according to claim 1, wherein the middle line is drawn crosswise to a tangent to an inflection of the corrugation when the corrugation is curved.

3. A process for production of an optically diffractive structure according to claim 1, wherein the corrugation-like convexo-concave shapes comprise individually standing peak-like shapes.

4. A duplication plate material for duplicating an optically diffractive structure provided with a surface configuration having plural corrugation-like convexo-concave shapes, wherein, the duplication plate material has plural corrugation-like convexo-concave shapes, and has a cross-sectional surface crosswise to said corrugation, in which a salient section which is defined by a salient line and a middle line which is drawn by connecting midpoints of the height of the convexo-concave shapes is smaller in area than that of an adjacent reentrant section which is defined by a reentrant line and the middle line and these salient and reentrant sections are situated next to each other on the bias having midpoints in common.

5. A medium having an optically diffractive structure produced by a process comprising steps of:

providing a duplication plate material provided with a surface configuration having plural corrugation-like convexo-concave shapes, and having a cross-sectional surface crosswise to said corrugation, in which a salient section which is defined by a salient line and a middle line which is drawn by connecting midpoints of the height of the convexo-concave shapes is smaller in area than that of an adjacent reentrant section which is defined by a reentrant

line and the middle line and these salient and reentrant sections are situated next to each other on the bias having midpoints in common;

pressing an optically diffractive layer made of ionizing radiation curable resin with the duplication plate material under a heating or non-heating condition to impart a surface configuration having plural corrugation-like convexo-concave shapes to the optically diffractive layer; and

curing the optically diffractive layer with ionizing radiation after and/or upon providing said surface configuration.

6. A medium having an optically diffractive structure according to claim 5, wherein a surface of the optically diffractive layer comprises a collection of plural sections different in corrugation direction and/or corrugation cycle and/or convexo-concave shape and/or convexo-concave height.

7. A medium having an optically diffractive structure according to claim 5, wherein the corrugation-like convexo-concave shapes form a relief hologram and/or a diffraction grating.